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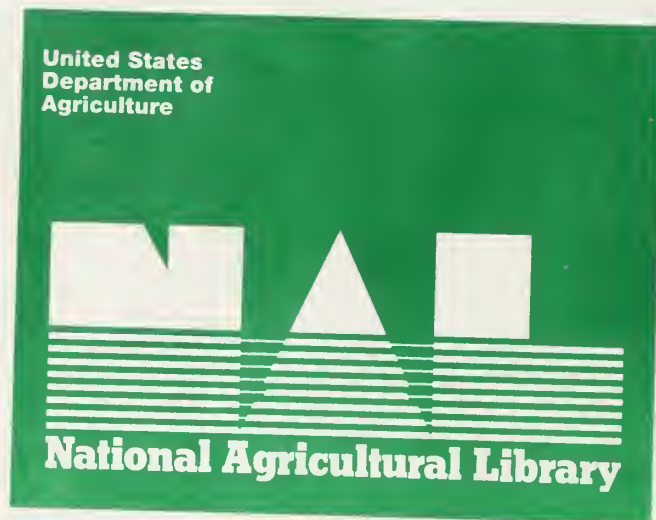
**UNITED STATES  
STANDARDS**  
*for grades of*  
**FROZEN  
BRUSSELS SPROUTS**



**EFFECTIVE MAY 11, 1951**

**Second Issue**

These standards supersede the standards  
which have been in effect since  
June 15, 1945



This is the second issue of the United States Standards for Grades of Frozen Brussels Sprouts, effective May 11, 1951. Subsequent to that date, these standards were recodified in the Federal Register of December 9, 1953 (18 F.R. 7947) and Section 52.658 was amended by an over-all amendment, May 22, 1957 (22 F.R. 3547).

This issue is included in the Code of Federal Regulations, Title 7 -- Agriculture, Part 52.

This grade standard is issued under authority of the Agricultural Marketing Act of 1946 which provides for the issuance of official U.S. grades to designate different levels of quality for the voluntary use of producers, buyers, and consumers. Official grading service is also provided under this Act upon request of the applicant and upon payment of a fee to cover the cost of the service.

As is the case of other standards for processed fruits and vegetables, these standards are designed to serve as a convenient basis for sales, for establishing quality control programs, and for determining loan values. They will also serve as a basis for the inspection of this commodity by Federal inspection service, which is available for the inspection of other processed products as well.

These standards are issued by the Department after careful consideration of all data and views submitted and the Department welcomes suggestions which might aid in improving these standards in future revisions. Comments may be submitted to, and copies of these standards obtained from:

Chief, Processed Products Standardization and Inspection Branch  
Fruit and Vegetable Division, C&MS  
U.S. Department of Agriculture  
Washington, D. C. 20250



**UNITED STATES STANDARDS FOR GRADES OF  
FROZEN BRUSSELS SPROUTS 1/**

Effective<sup>1</sup>  
May 11, 1951

Second issue: These standards supersede the standards that  
have been in effect since June 15, 1945

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**PRODUCT DESCRIPTION AND GRADES**

§ 52.651 *Product description.* Frozen Brussels sprouts are prepared from the fresh heads of the Brussels sprouts plant (*Brassica oleracea gemmifera*) by trimming, washing, and blanching and are frozen and maintained at temperatures necessary for the preservation of the product.

§ 52.652 *Grades of frozen Brussels sprouts.* (a) "U. S. Grade A" or "U. S. Fancy" is the quality of frozen Brussels sprouts that possess similar varietal characteristics; that possess a good

color; that are practically free from defects; that possess a good character; that possess a good flavor and odor; and that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U. S. Grade B" or "U. S. Extra Standard" is the quality of frozen Brussels sprouts that possess similar varietal characteristics; that possess a reasonably good color; that are reasonably free from defects; that possess a reasonably good character; that possess a good flavor and odor; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U. S. Grade C" or "U. S. Standard" is the quality of frozen Brussels sprouts that possess a fairly good color; that are fairly free from defects; that possess a fairly good character; that possess a fairly good flavor and odor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U. S. Grade D" or "Substandard" is the quality of frozen Brussels sprouts that fails to meet the requirements of U. S. Grade C or U. S. Standard.

**FACTORS OF QUALITY**

§ 52.653 *Ascertaining the grade.* (a) The grade of frozen Brussels sprouts is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the

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<sup>1</sup> Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

factors of color, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors:	Points
Color -----	30
Absence of defects-----	40
Character -----	30
Total score-----	100

(c) The scores for the factors of color and absence of defects of Brussels sprouts are determined immediately after thawing so that the product is sufficiently free from ice crystals to permit proper handling as individual units and the product is completely thawed to determine the factor of character. The product is cooked to determine the flavor and odor.

(d) "Good flavor and odor" means that the product after cooking has a good, characteristic, normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(e) "Fairly good flavor and odor" means that the product after cooking may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.654 *Ascertaining the rating for the factors which are scored.* The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "27 to 30 points" means 27, 28, 29, or 30 points).

§ 52.655 *Color—(a) General.* The color of Brussels sprouts is based on the characteristic and predominating color of the outer surfaces of the Brussels sprouts.

(1) "Yellow-green" means a predominating characteristic green color with a definite yellow cast.

(2) "Yellow" means a predominating characteristic yellow color with slight

tinges of green or a predominating characteristic yellow color typical of the color Brussels sprouts possess after the outer green leaves have been removed.

(b) (A) *classification.* Frozen Brussels sprouts that possess a good color may be given a score of 27 to 30 points. "Good color" means that not more than 5 percent, by count, of the units may be yellow and that the remainder of the units are yellow-green or more green in color. One Brussels sprout in a single container is permitted to be yellow if such unit exceeds the allowance of 5 percent.

(c) (B) *classification.* If the frozen Brussels sprouts possess a reasonably good color, a score of 24 to 26 points may be given. Frozen Brussels sprouts that fall into this classification shall not be graded above U. S. Grade B or U. S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that more than 5 percent, by count, but not more than 25 percent, by count, of the units are yellow and that the remainder of the units are yellow-green or more green in color.

(d) (C) *classification.* If the frozen Brussels sprouts possess a fairly good color, a score of 21 to 23 points may be given. Frozen Brussels sprouts that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that more than 25 percent, by count, of the units are yellow and that the remainder, if any, are yellow-green or more green in color but are not off-color for any reason.

(e) (Std) *classification.* Frozen Brussels sprouts that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.656 *Absence of defects—(a) General.* The factor of absence of defects refers to the degree of freedom from grit,



silt, harmless extraneous material, loose leaves and loose small pieces, poorly trimmed units, and from units damaged by discoloration, mechanical injury, pathological injury, insect injury, or other means.

(1) "Grit" (or sand) is rough, hard particles of earthy sediment.

(2) "Silt" is fine earthy sediment from material such as mud or clay.

(3) "Harmless extraneous material" means vegetable substances other than from Brussels sprouts, such as weeds and grass and any portion thereof, that are harmless.

(4) "Loose leaves and loose small pieces" means leaves, pieces of leaves, and small pieces of edible stalk or stems not attached to a unit, whether or not damaged.

(5) "Poorly trimmed units" means (i) that the butt end is not trimmed smoothly and closely at the approximate point of attachment of the outer leaves; or (ii) that the appearance of the unit is materially damaged from excessive cutting into the head. Brussels sprouts heads from which the leaves have been stripped, whether or not excessively, are not considered "poorly trimmed units."

(6) "Damaged" means any unit damaged by surface or internal discoloration, mechanical injury, pathological injury, insect injury, or by other means to the extent that the appearance or eating quality is materially affected.

(7) "Seriously damaged" means any unit damaged to such an extent that the appearance or eating quality is seriously affected.

(b) *(A) classification.* Frozen Brussels sprouts that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that no grit or silt that affects the appearance or eating quality of the product is present; no harmless extraneous material is present; loose leaves and loose small pieces that do not affect the appearance or eating quality of the product may be present; and that units that are damaged or seriously damaged do not exceed 10 percent, by count, of all the

units, but of such 10 percent not more than one-half thereof or not more than 5 percent, by count, of all the units may be seriously damaged; and, in addition, not more than 10 percent, by count, of all the units may be poorly trimmed.

(c) *(B) classification.* If the frozen Brussels sprouts are reasonably free from defects, a score of 32 to 35 points may be given. Frozen Brussels sprouts that fall into this classification shall not be graded above U. S. Grade B or U. S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that no grit or silt that affects the appearance or eating quality of the product is present; not more than one piece of harmless extraneous material may be present for each 20 ounces of net weight; loose leaves and loose small pieces that do not materially affect the appearance or eating quality of the product may be present; and that units that are damaged or seriously damaged do not exceed 20 percent, by count, of all the units, but of such 20 percent not more than one-half thereof or not more than 10 percent, by count, of all the units may be seriously damaged; and, in addition, not more than 15 percent, by count, of all the units may be poorly trimmed.

(d) *(C) classification.* Frozen Brussels sprouts that are fairly free from defects may be given a score of 28 to 31 points. Frozen Brussels sprouts that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that a slight trace of grit or silt that does not affect materially the appearance or eating quality of the product may be present; not more than two pieces of harmless extraneous material may be present for each 20 ounces of net weight; loose leaves and loose small pieces that do not seriously affect the appearance or eating quality of the product may be present; and that units that are damaged, seriously damaged, or poorly trimmed do not exceed 50 percent, by count, of all the units, but of such 50 percent not more

than three-tenths thereof or not more than 15 percent, by count, of all the units may be seriously damaged and of such 50 percent not more than two-fifths thereof or not more than 20 percent, by count, of the units may have butt ends that are not trimmed smoothly and closely at the approximate point of attachment of the outer leaves.

(e) (*SStd*) *classification*. Frozen Brussels sprouts that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.657 *Character*—(a) *General*. The factor of character refers to the degree of development and tenderness and texture of the Brussels sprouts heads.

(1) “Well developed” means that a Brussels sprout head is well formed, compact, and reasonably firm.

(2) “Reasonably well developed” means that a Brussels sprout head is reasonably well formed, reasonably compact, and fairly firm.

(3) “Fairly well developed” means that a Brussels sprout head is fairly well formed but may have been reduced in size or excessively stripped by removal of leaves.

(4) “Very loose-structured” means that a Brussels sprout head is very light in weight in comparison to its size and possesses large open spaces resulting in a very spongy condition that yields easily and considerably to moderate pressure.

(b) (*A*) *classification*. Frozen Brussels sprouts that possess a good character may be given a score of 27 to 30 points. “Good character” means that not less than 80 percent, by count, of the units are well developed and that the remainder are reasonably well developed or fairly well developed and not more than an occasional unit may be very loose-structured.

(c) (*B*) *classification*. If the frozen Brussels sprouts possess a reasonably good character, a score of 24 to 26 points

may be given. Frozen Brussels sprouts that fall into this classification shall not be graded above U. S. Grade B or U. S. Extra Standard, regardless of the total score for the product (this is a limiting rule). “Reasonably good character” means that not less than 50 percent, by count, of the units are at least reasonably well developed; not more than 10 percent, by count, may be very loose-structured units; and the remainder are fairly well developed.

(d) (*C*) *classification*. Frozen Brussels sprouts that possess a fairly good character may be given a score of 21 to 23 points. Frozen Brussels sprouts that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). “Fairly good character” means that not less than 50 percent, by count, of the units are at least fairly well developed.

(e) (*SStd*) *classification*. Frozen Brussels sprouts that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

#### LOT INSPECTION AND CERTIFICATION

§ 52.658 *Ascertaining the grade of a lot*. The grade of a lot of

frozen Brussels sprouts covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

## SCORE SHEET

§ 52.659 *Score sheet for frozen Brussels sprouts.*

Size and kind of container.....		.....
Container mark or identification.....		.....
Label.....		.....
Net weight (ounces).....		.....
Count.....		.....
Factors	Score points	
Color.....	30	(A) 27-30 (B) <sup>1</sup> 24-26 (C) <sup>1</sup> 21-23 (D) <sup>1</sup> 0-20
Absence of defects.....	40	(A) 36-40 (B) <sup>1</sup> 32-35 (C) <sup>1</sup> 28-31 (D) <sup>1</sup> 0-27
Character.....	30	(A) 27-30 (B) <sup>1</sup> 24-26 (C) <sup>1</sup> 21-23 (D) <sup>1</sup> 0-20
Total score.....	100	.....
Flavor and odor.....	.....	.....
Grade.....	.....	.....

<sup>1</sup> Indicates limiting rule.

*Recodified in the Federal Register of December 9, 1953 (18 F.R. 7947).*

§ 52.658 amended, May 22, 1957 (22 F.R. 3547).

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